Enhanced Digitalisation and Competition Law Enforcement in Slovakia

Mária T. Patakyová

Institute of European Law
Faculty of Law
Comenius University in Bratislava
Šafárikovo nám. č. 6
Bratislava 810 00, Slovakia
Email: maria.patakyova2@flaw.uniba.sk

Abstract: Digitalisation is a challenge from the regulatory point of view. Competition law, as a special type of regulation, is no exception to this. The article explores the risks of digitalisation, especially the ones related to the enhanced use of pricing algorithms. In theory, pricing algorithms are not easily assessed from the perspective of competition law, let alone its application in practice. The prohibition of anticompetitive agreements (pursuant to Article 101 of the Treaty on Functioning of the European Union (TFEU)) is applied with certain difficulty to agreements created by using pricing algorithms. This is an unfortunate situation, as horizontal agreements represent one of the worst infringements of EU competition law, including price cartels or bid rigging. Apart from presenting a theoretical background, the article dives into the practice of the Antimonopoly Office of the Slovak Republic (AMO) in order to assess which practical issues the AMO might face when applying the theoretical concepts. In sum, the article asks from a theoretical perspective which issues of competition law have been introduced (or deepened) by the enhanced digitalisation, looking in particular to pricing algorithms. On top of that, the article explores the issues which may be encountered in practice, taking the Slovak jurisdiction as the example. The willingness and feasibility of the AMO to enforce digital issues such as pricing algorithms is assessed based on the previous acts of the AMO as well as the new Act on Protection of Competition, adopted by the Slovak parliament on 11 May 2021.

Keywords: *Antimonopoly Office of the Slovak Republic, competition law, digitalisation, enforcement, pricing algorithms*

1. Introduction

The ongoing COVID-19 crisis has taught us many lessons. The digital economy has replaced many non-digital sectors during lockdowns all over the world. E-commerce, which had been well-present in all economies before the crisis took place, has grown massively in the past months (Wolski, 2020, p. 150). This has deepened the issues with digitalisation already known before the crisis.¹

A field of law actively discussing issues related to digitalisation is competition law. The European Commission is aware of the challenges that digitalisation has brought into this field. The well-known report *Competition Policy for the Digital Era* discusses several implications of the digitalisation on competition law (Crémer, de Montjoye & Schweitzer, 2019). The article will focus on the antitrust part of EU competition law, in particular on anticompetitive agreements.

An issue which has prompted heated discussions among scholars is a cartel concluded via algorithms. The main concern here is occurrence of a scenario in which a cartel is effectively committed but competition authorities either do not have appropriate substantive rules capturing the scenario or they do not have tools strong enough to spot and enforce the cartel.

All these thoughts are of rather theoretical nature. In practice, a particular situation of a national competition authority might change the outcome of the discussion on the implications of digitalisation on competition law. Therefore, it is practical to choose a particular jurisdiction and discuss the issues presented above in a specific context of such a jurisdiction. This article chooses the Slovak Republic and the position of the Antimonopoly Office of the Slovak Republic (AMO), focusing on the antitrust part of the competition practice in Slovakia, predominantly on anticompetitive agreements. It is worth mentioning that the legislation has recently changed in Slovakia, hence, the paper looks into the issues of digitalisation and competition law in light of the new Act no. 187/2021 Coll. on Protection of Competition and

¹ It is worth mentioning that digitalisation does not take place at the same pace all around Europe (Stavytskyy, Kharlamova & Stoica, 2019).

on Amendment and Supplement of certain Acts, adopted by the National Council of the Slovak Republic on 11 May 2021 (henceforth, the Act) and effective as of 1 June 2021.

Thus, the article asks from a theoretical perspective which issues of competition law has the enhanced digitalisation introduced (or deepened), looking in particular to pricing algorithms. It is not the purpose of the article to analyse these issues in their full depth, since they should rather demonstrate the high-level impact of digitalisation on competition law. From a more practical perspective, the article asks how theoretically difficult concepts, such as collusion through pricing algorithms, may be applied by a (rather small) national competition authority. In order to assess the example here, the Slovak AMO, the article explores the experiences of the AMO in relation to the digital sector. Moreover, since the Act was adopted only very recently, it is worth looking into its wording with an aim to assess a possible impact on the AMO's practice in the digital sector. Based on these findings, the author predicts whether, first, the AMO is willing to cope with the issues brought by digitalisation and, second, whether it is feasible that the AMO will be successful in doing so.

2. The antitrust part of EU competition law and digitalisation—an overview

The Commission's report identifies the following characteristics of the digital economy: extreme returns to scale, network externalities, and the role of data (Crémer, de Montjoye & Schweitzer, 2019). "A consequence of these characteristics is the presence of strong 'economies of scope', which favour the development of ecosystems and give incumbents a strong competitive advantage" (Crémer, de Montjoye & Schweitzer, 2019, p. 2).

Digitalisation challenges the capabilities of competition law throughout the process of competition analysis. First, it is very difficult to identify a relevant market. Defining a relevant market is a fundamental step for a competition law analysis. As put by Pike "[a] traditional starting point for framing an analysis of the competitive effects of a merger, an action or an agreement is to define the relevant market(s) that might be affected" (Pike, 2017, p. 5). Based on the definition of the relevant market, one may assess the market shares of undertakings. This is vital for a further assessment such as whether undertakings benefit from safe harbour provided by De Minimis Notice

(European Commission, 2014), or whether block exemptions regulations are applicable (see, e.g., European Commission, 2010). The market share of an undertaking is also the first indication of whether such an undertaking has a dominant position. It is assumed that if an undertaking has less than 40%, it is probably not a dominant undertaking (European Commission, 2013).

In short, the definition of the relevant market is vital for a competition law analysis. However, such a definition is problematic in the digital environment, especially in case of zero-price markets. In such markets it is impossible to apply the traditional way of definition of the relevant market, the test of small but significant non-transitory increase in price (SSNIP) (European Commission, 1997). There is simply no price that might be increased.

From the Commission's report one may conclude that the proposed way is to rather focus on the theories of harm and indication of anticompetitive strategies than on the strict definition of the relevant market. This seems to be an elegant solution, however, it is not clear how the need for the relevant market definition can be circumvented in a competition law analysis (Patakyová, 2020a).

Naturally, market definition is not the only problem related to digitalisation. Increased use of the digital word has led to the establishment of certain supra-dominant companies. Their influence is beyond the economic sphere and they are capable of shaping the socio-political world, too (Mazúr & Patakyová, 2019). It is actively discussed whether such behaviour might be captured by competition law (Botta & Wiedemann, 2018).

Less controversially, one may consider new ways of establishing market power, such as data handling. The traditional assessment of the abuse of the dominant position is related to a position of economic strength enabling the dominant undertaking to act to a significant extent independently from its competitors and customers, hence to prevent effective competition being maintained on the relevant market (see the case *Hoffmann-La Roche & Co. AG v. Commission* [1979]).

The question is to what extent is data handling fuelling the economic strength mentioned above. The answer is clear, at least for certain jurisdictions. For instance, German legislation interlinks data with the dominant position.² On the other hand, such a link is not clear in EU competition law (Mazúr & Patakyová, 2019).

² This is the reason why the so-called German Facebook decision could be issued particularly in Germany. Further regarding this case see Mazúr and Patakyová, 2019.

3. Pricing algorithms

It is undoubted that the pandemic situation is fuelling digitalisation, as e-commerce is increasingly used (UNCTAD, 2020). At times, brick-and-mortar shops are completely closed, or people are not allowed to leave their house except for most inevitable reasons. This leaves shopping to the only space—the digital space.

A range of issues is related to digitalisation. The focus shall be on horizontal anticompetitive agreements pursuant to Article 101 of the TFEU, which may include price cartels or bid rigging. One may identify several concrete risks which might aggravate the situation of anticompetitive agreements.

First, digitalisation is related to data availability. As briefly noted above, data leads to strengthening of the market position. Data may be used for targeted advertisement (Stucke & Grunes, 2016, p. 57) and for users' profiling, which may lead to better sales tactics. Data availability and data handling introduce concerns related to consumers' welfare. Consumer is in a worse position by definition; however, with so much data available to undertakings, they may know the consumer (or the type) even better than the consumer knows himself. This may lead to price discrimination of consumers, although such is a practice of Article 102 rather than Article 101 (Townley, Morrison & Yeung, 2017).³ In other words, if there is no dominant position of the undertaking, such a practice may not be covered by EU competition law, unless two undertakings agreed or entered into a concerted practice regarding the use of price discrimination.⁴

Second, when shopping online, prices are also available online and not exclusively for consumers. Competitors may see the prices too. The problem of transparent pricing in the digital economy is well-acknowledged (Jones & Sufrin, 2016, p. 689; Gal, 2018), and it is possibly related to exchange of information. From the economic perspective, if information is exchanged between competitors, coordination between them is achieved more easily (Niels, Jenkins & Kavanagh, 2016, p. 243). Traditionally, exchange of information is one of the practices potentially infringing Article 101 of

³ Note that competition law is not the only regulatory mechanism for protection of consumers in digital environment. See, for instance, Vítková, 2013.

⁴ Article 101 para. 1 lit. d) forbids such agreements which “*apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage*”.

the TFEU (Jones & Sufrin, 2016, p. 679).⁵

The basic rule states that if the exchange of information “reduces or removes the degree of uncertainty as to the operation of the market in question, with the result that competition between undertakings is restricted” (*Fresh Del Monte Produce, Inc. v. European Commission* [2013], para. 303; *Thyssen Stahl v. Commission* [2003], para. 81) such exchange of information may be incompatible with Article 101 of the TFEU. It is presumed that the undertakings take into consideration the exchanged information if they take part in a concerted action, unless they prove otherwise (*Fresh Del Monte Produce, Inc. v. European Commission* [2013], para. 298).

Third, Article 101 of the TFEU is threatened even more if the transparent pricing is combined with pricing algorithms. Competition & Markets Authority stated, that, “algorithms can reduce transaction costs for firms, reduce frictions in markets, and give consumers greater information on which to base their decisions” (Competition & Markets Authority, 2018, p. 3). Pricing algorithms may use artificial intelligence, big data techniques, data and analysis of competitors’ and consumers’ behaviour (Gal, 2018, p. 11).

Ezrachi and Stucke (2015) distinguish between four categories of employment of algorithms in anticompetitive agreements—Messenger, Hub and Spoke, Predictable Agent, and Digital Eye. The first category is not problematic, as the undertakings are using the algorithm only as a prolonged hand of humans. The second category poses certain questions, as the undertakings “use the same (or a single) algorithm to determine the market price or react to market changes. In this scenario, the common algorithm, which traders use as a vertical input, leads to horizontal alignment” (Ezrachi & Stucke, 2015, p. 1787). The third category starts to be a true challenge, as

each firm unilaterally uses the computer as part of a subtle strategy to enhance market transparency and predict behavior. Under certain market conditions, the industry-wide use of algorithms transforms the market dynamic to effectively enable conscious parallelism and higher prices. (Ezrachi & Stucke, 2015, p. 1789)

The fourth category is related to a scenario when algorithms may independently reach the stage of conscious parallelism, because they will evaluate that this is the most optimal situation for them (Ezrachi & Stucke, 2015, p. 1795).

⁵ Note that, under Article 101(1) of the TFEU, not only agreements, but also concerted practices and decisions of associations of undertaking may be forbidden, if their object or effect is restriction of competition. For further elaboration, see Patakyová, 2020b.

The CJEU has already gained experiences with the infringement of Article 101 conducted through algorithms. In the *Eturas* case (*“Eturas” UAB and Others v. Lietuvos Respublikos konkurencijos taryba* [2016]), the administrator of the system which was used by travel agencies sent a message regarding the discounts on products sold through that system. In this manner, the discounts were supposed to be capped. Subsequently, the system was changed in order to implement the capping of discounts. Travel agencies might have been presumed to have participated in an infringement of Article 101 of the TFEU (*via* concerted practice), however, only if they were aware of the message and did not publicly distance themselves or rebutted the presumption otherwise. This approach suggests that the infringement of Article 101 of the TFEU is linked to the knowledge of humans (Picht & Freund, 2018, p. 17). In the *Eturas* case, this might have been established towards certain travel agencies (Lawrence & Linsner, 2017). However, it shall be stressed that the algorithm did not play such a significant role in this case as in the third category or the fourth category described above, thus the case was more straightforward from the theoretical perspective.

Transparent pricing and pricing algorithms are removing the line between parallel behaviour and tacit collusion. As has been established elsewhere (Patakyová, 2020b), objective evidence, such as price development, might not be enough to prove a concerted practice which is prohibited by Article 101 of the TFEU. “This is due to the fact that undertakings may claim that the use of the same pricing algorithm is substantiated by other reasons than collusion.” (Patakyová, 2020b, p. 250).

Fourth, the price definition seems to be shifted from the market to space before the market. As put by Maik, “if competing algorithms are calibrated for profit maximization and can recognize and evaluate competitors’ price strategies, a supracompetitive balance can be negotiated in the way of virtual repeated games instead of a price war involving the consumer.” (Maik, 2019, p. 16). Therefore, undertakings (or, more appropriately, their algorithms) are exchanging the price expectation, calibrate it until the level is settled and only then the price is available for the consumer (Maik, 2019).

As Maik concludes, if algorithms are programmed in a way that they react to each other intensively and eliminate spontaneous purchasing decisions by consumers, we cannot understand this as a parallel behaviour, but rather as a concerted practice (Maik, 2019, p. 17).

How can the situation of enforcement of pricing algorithms be improved? There are several proposals in this regard. For instance, Gal (2018, p. 38) presents the rule of reason analysis. This consists of three consecutive questions. The first one basically asks whether the algorithm facilitates the collusion. If no, the algorithm is benign. If yes, the second question asks whether there are any procompetitive aspects of the algorithm. If no, it is illegal. If yes, we are supposed to ask the third question, which basically includes a proportionality test.

Another approach suggested by Crémer, de Montjoye and Schweitzer (2019) is the shift in burden of proof. The authors discussed this possibility within the error cost framework. As they specified,

in the context of highly concentrated markets characterised by strong network effects and high barriers to entry (i.e. not easily corrected by markets themselves), one may want to **err on the side of disallowing potentially anticompetitive conducts, and impose on the incumbent the burden of proof for showing the pro-competitiveness of its conduct.** (Crémer & de Montjoye & Schweitzer, 2019, p. 4)

Applied to the pricing algorithms, this shall mean that, for instance, undertakings will need to prove that their pricing algorithms are procompetitive, or, at least, not anticompetitive. Eventually, this may not be so far from the rule of reason analysis mentioned above.

4. The AMO and digitalisation

The developments mentioned above take place all around the world. The article will zoom in on actions taken by the AMO in relation to digitalisation and on how the new Act responds to the problem of digitalisation.

4.1 Actions taken by the AMO

First, in March 2020, the AMO (2020) joined the Joint Statement (ECN, 2020), by which the competition authorities around the EU expressed their understanding towards the difficult situation in which undertakings might find themselves due to the COVID-19 crisis. The AMO stressed that any abuse of the situation would be closely watched by the authority (AMO, 2020).

Second, in July 2021, the AMO issued a new set of priorities (AMO, 2021a). Prioritisation is an important tool for competition authorities in order to work efficiently with relatively limited resources (Patakyová, 2019a, p. 33). The new AMO's priorities are based on severity of the practice, importance of the market and success probability. The AMO listed three practices as short term priorities: cartels, bid rigging and unannounced mergers. Regarding the sectors, the AMO will zoom in on e-commerce and digital platforms, automotive, IT and systems and health care.

Regarding the sector of e-commerce and digital platforms, the AMO declared that consumers are increasingly using the online product and services and that it is inevitable to secure the application of competition law principles in this sector (AMO, 2021a).

Third, it becomes evident that digitalisation is indeed one of the priorities.⁶ However, what are the AMO's experiences in this sector?

Since 2017, the AMO has been conducting a sector inquiry in e-commerce.

The aim of this sector inquiry is to gather documentation and information on the functioning of e-commerce in specific markets and to identify potential competition problems with the impact on suppliers, sellers and consumers of products offered through online channels. (AMO, 2018, p. 49)

Based on the information available on the AMO website, the sector inquiry in e-commerce has not yet been published (AMO, 2013).

Fourth, apart from the sector inquiry, the AMO issued a decision against ags 92, s.r.o. imposing a fine of 20,632 euros (AMO, 2019b). The practice was considered as a vertical agreement containing a “by object” restriction—resale price maintenance. Thus, the agreement was considered to be against §4, para. 1 (lit.)(a) of the Previous Act⁷; as well as Article 101(1) of the TFEU.

Ags 92, s.r.o. was a distributor who determined resale prices of “Chicco goods sold by retail customers—operators of internet shops/e-shops with children's goods to end customers in the territory of the Slovak Republic and in the

⁶ The issues discussed above related to pricing algorithms are intrinsic to e-commerce and digital platforms.

⁷ Act no. 136/2001 Coll. on Protection of Competition and on Amendment and Supplement of Act of the Slovak National Council no. 347/1990 Zb. on Organisation of Ministries and Other Central Authorities of State Administration of the Slovak Republic as amended, as amended (henceforth, the Previous Act).

territory of the Czech Republic” (AMO, 2019b, p. 29). Due to the settlement, the fine for ags 92, s.r.o. was decreased by 50% to the amount eventually imposed by the AMO in the decision (AMO, 2019b).

It is also due to the settlement and due to the “by object” restriction that the AMO was not forced to conduct an in-depth analysis of the relevant market. In any case, the infringement took place in a traditional e-commerce sector, hence, there were no concerns about zero-price markets. Eventually, the examined field (i.e., not the relevant market per se) was specified as a distribution and sale of goods for children under the Chicco brand through e-shops on the territory of the Slovak Republic and Czech Republic (AMO, 2019b, p. 43).

Regarding the practice, ags 92, s.r.o. described the retail prices in the pricelists as recommended. However, the primary goal of the undertaking was to make these prices obligatory. Observation of the retail prices was controlled by the undertaking (AMO, 2019b, pp. 51–52):

- by platforms for comparison of prices, such as heureka.sk and heureka.cz;
- by whistle-blowing of maverick’s competitors.

In the case of continuous disobedience of the maverick, sanctions in the form of prolongation of products’ delivery time or withdrawal of rebates took place (AMO, 2019b, p. 53). As stated above, these actions were considered to be an anticompetitive agreement and were fined by the AMO based on the settlement decision.

Fifth, the AMO is also aware of the fact that the problems raised by the digital economy have fuzzy boundaries and it is necessary to cope with these problems in cooperation with other competition authorities (AMO, 2019a, p. 59). In line with this, in February 2021, the AMO announced that it had joined the competition authorities around the world cooperating on a project focused on a new field of legal IT—Computational Antitrust. The project is led by CodeX at the Stanford University in California, USA (CodeX, 2021). Among other goals, it explores the possibilities of automatization of antitrust processes, improving of analyses and creating computing methods. As put by the AMO, the implementation of computing methods is necessary in the ever-more complex markets (AMO, 2021b).

To this point, we are not aware of any specific algorithmic tool which is used by the AMO to detect online collusion.⁸ On the other hand, it is worth mentioning that the AMO has quite strong investigatory powers, based on both the Previous Act⁹ and on the new Act¹⁰. Consequently, the AMO could probably gain access to the undertakings' algorithms.

4.2 The new Act and digitalisation

On 11 May 2021, the new Act was adopted by the Slovak parliament. Unfortunately, the Act does not contain any specific provisions related to digitalisation. However, several provisions may be understood as related to challenges brought by the enhanced digitalisation:

- Pursuant to §3, para. 1, an entrepreneur *qua* the subject of the competition regulation is defined in line with the notion of undertaking pursuant to EU competition law.¹¹ This is an important development, since the Previous Act linked the definition of entrepreneur to the legal personality.¹² It is yet to show whether this amendment eases the enforcement of digital entities' acts and agreements, or whether it hinders the enforcement due to a more complex definition of the undertaking which shall probably be required under the new definition;
- Pursuant to §16, para. 2 of the Act, the AMO may refuse a complaint which is not a priority, it takes into account the actual prioritization policy. Although refusal of non-priority matters had been a practice for many years before the Act was adopted, this provision gives a specific possibility for the AMO to refuse a complaint in a matter which is not

⁸ For a brief explanation of how the competition authorities may rely on algorithms and artificial intelligence in enforcement of competition law see, for instance, Patakyova (2019b).

⁹ Pursuant to §22, para. 2 of the Previous Act, the AMO shall have the right to request information and documents necessary for the AMO's activities, regardless of the medium on which they are recorded, and make copies of and notes of these documents. Documents and information shall be provided free of charge. Pursuant to §22a, para. 5 lit. (d), while conducting an inspection, the AMO shall have access to all information which has been stored in any electronic form on data storage of the undertaking or which were created in any electronic form by the undertaking or which the undertaking may access in connection with its activity. For the English version of the Previous Act, see AMO (2014).

¹⁰ Similar powers of the AMO are stated in the Act. See §16, para. 3 regarding the power to gain information; and §17, para. 5 lit. (d) regarding power during inspections.

¹¹ For this notion, see, for instance, Whish and Bailey (2018, pp. 83–92) and Kalesná (2019, p. 71).

¹² §3 para. 1 of the Previous Act defined the entrepreneur as entrepreneur pursuant to the Act no. 513/1991 Coll. Commercial Code, as amended; and certain others natural or legal persons. For further details see Kalesná and Patakyová (2019) and Blažo (2017).

a priority. Thus, the AMO shall have enough capacity to solve the priorities; digital problems (hopefully) included;

- Pursuant to §28 of the Act, the AMO shall adopt a decision within 3 years since the commencement of the procedure. This gives the AMO the time to assess even the problematic features related to the digital markets. However, the digital markets are known for their rapid development; therefore, although the time for assessment is long enough for the AMO to adopt a high quality decision, for the competition on the markets themselves it may be too late. This is why it is even more important that the possibility to adopt interim measures was introduced in the Act, as stated in the next point;
- Pursuant to §31 of the Act, the AMO may issue interim measures. They may be imposed even before the termination of the procedure (thus before finding an infringement of competition law), if there is a reasonable assumption that the infringement of the antitrust part of competition law took place and that there is a risk of serious and irreparable distortion of competition. Alternatively, interim measure may be imposed in order to secure proper continuation of the administrative procedure. In any case, the interim measures may take the form of (i) obligation of undertaking to *dare, facere, omittere, pati*; or (ii) to secure a thing which shall be destroyed or which is necessary for evidence. The interim measures may prove fruitful in the digital environment due to its rapidly changing character. It may be assumed that if the AMO commences an investigation in a complex matter related to pricing algorithm, the assessment may take too long to bring a result in due time. Therefore, issuance of an interim measure may be considered as a proper solution;
- Pursuant to §32 of the Act, the AMO may issue measures. The requirements for these are, in a nutshell, as follows: (i) the AMO is deciding an antitrust case; (ii) the imposed measure shall be proportional to the breach and necessary for the efficient termination of this breach; (iii) the imposed measure shall be for a specified period of time or it shall be performed within a time limit; (iv) the imposed measure may be annulled or amended by the AMO on its own motion; (v) the imposed measure may be of behavioural or structural nature; (vi) an independent administrator may be imposed to the costs of the undertaking. The explicit possibility to impose behavioural or structural measures may lead to improvement of the competition on the market. It is a well-known fact that to fine an undertaking infringing competition law does not need to solve the problem on the market which was created

by the infringement. Thus, the AMO may, by imposing appropriate measures, rectify the situation on the market. For instance, it may order not to use a certain type of pricing algorithms once they prove to be of anticompetitive nature;

- Pursuant to §58 et seq. of the Act, mutual assistance and cooperation between competition authorities shall be established. Since the digital issues are scarcely related to one jurisdiction, these provisions may improve the overall enforceability of competition law in the digital environment.

What can be drawn from this short discussion on the changes brought by the Act? On the one hand, there are several amendments which may improve the situation of the AMO with respect to the problems brought by the digital environment, such as pricing algorithms. The main improvement possibly lies in the power to issue interim measures, thus remedying the probable infringement of competition law much sooner than if a final decision was needed. On the other hand, the Act fails to bring a specific set of rules improving the enforcement of competition law in the digital environment. For instance, no provision introduces a rule of reason analysis or a change in burden of proof in situations such as a collusion through pricing algorithms.

5. Conclusion

This article looked into the problem of digitalisation in the context of competition law. There are several issues mentioned, mainly the problem of the correct definition of the relevant market, which is a cornerstone of the competition law analysis. Some other issues were suggested in this article as well, with a special attention paid to pricing algorithms. Anticompetitive agreements, such as price cartels or bid rigging, concluded by using pricing algorithms may be captured by Article 101 of the TFEU, however, there is a thin line between illegal concerted practices and legal parallel behaviour.

The AMO is well aware of the challenges brought along by digitalisation and in addition to following the EU trends by focusing on the topic, it has even been set as one of its priorities. Nevertheless, concrete steps taken in this sector are rather scarce. The case *ags 92, s.r.o.* was more or less straightforward, as it was related to “by object” restriction—resale price maintenance. The communication between undertakings was carried out by email (AMO, 2019b, p. 49) and the observance of the agreement was controlled

by platforms such as heureka.sk and heureka.cz for the comparison of prices (AMO, 2019b, p. 52). Therefore, the digital aspects in this case were rather limited.

In relation to the new Act, it becomes evident that several novel provisions were adopted. Some of them seem to improve the enforcement position of the AMO towards the digital environment. There seems to be potential in interim measures, since it is crucial for the AMO to act in a timely manner, especially in digital sectors. Yet, it will be seen if these new provisions are to be used for this purpose.

What is concerning is the fact that the AMO may not have enough capacity to fight against the complex digital issues, especially if their illegality is not clear even from a theoretical perspective. The Act did not improve the situation regarding the definition of the relevant market or anticompetitive agreements through pricing algorithms. Indeed, it is unfortunate that no special attention was given to the enforcement in the digital sector. For instance, no special rules were adopted in relation to change in the burden of proof or rule of reason analysis.

The article identified several AMO's statements proving that the AMO is well aware of the fact that digitalisation may threaten the well-functioning of competition on a market. We may conclude that the AMO is willing to be active in this sector. However, concrete examples of action taken in the sector are rather scarce; the sector study not being finished in several years; the case ags 92, s.r.o. being rather straightforward with limited digital aspects. Therefore, despite its willingness, the feasibility that the AMO shall fight digital infringement of competition law is not very high. This is underlined by the wording of the new Act which did not improve the enforcement position of the AMO in the digital sector to a great extent. Eventually, one may but hope that the AMO shall have enough will and capacity to enforce competition in this ever-more important sector of the digital economy.

Acknowledgements

This paper was supported by a grant project 'Agentúra na podporu výskumu a vývoja v rámci projektu č. APVV-17-0641: Zefektívnenie právnej úpravy verejného obstarávania a jej aplikácie v kontexte práva Európskej únie' ('Agency for the support of research and development within the project

no. APVV-17-0641: Streamlining the law on public procurement and its application in the context of EU law'). Many thanks to the reviewers who provided valuable remarks and comments improving the final version of the article.

Mária T. Patakyová is an assistant professor at the Institute of European Law, Faculty of Law, Comenius University in Bratislava (Slovakia), where she lectures on various subjects of EU law and coaches moot courts (CEEMC, ELMC). She has also studied and given lectures abroad (in Ljubljana, Tilburg, and Strasbourg). In her research she focuses on national and European competition law (including digital and zero-price markets), protection of human rights in Europe, business and human rights, internal market law, and consumer law. She is part of several national and EU grant projects, including Jean Monnet Module, Jean Monnet Network, and Jean Monnet Centre of Excellence.

References

- Act no. 136/2001 Coll. on Protection of Competition and on Amendment and Supplement of Act of the Slovak National Council no. 347/1990 Zb. on Organisation of Ministries and Other Central Authorities of State Administration of the Slovak Republic as amended, as amended.
- Act no. 187/2021 Coll. on Protection of Competition and on Amendment and Supplement of certain Acts.
- Act no. 513/1991 Coll. Commercial Code, as amended.
- AMO (2013), 'Sektorové štúdie a analýzy' [Sectoral studies and analyses], Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/sektorove-studie-a-analyzy/> [accessed 8 Apr 2021]
- AMO (2014), 'Act on Protection of Competition,' Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/act-on-protection-of-competition/> [accessed 31 May 2021]
- AMO (2018), *Annual Report 2018*, Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/data/att/2044.pdf> [accessed 8 Apr 2021]
- AMO (2019a), *Annual Report 2019*, Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/data/att/2108.pdf> [accessed 8 Apr 2021]
- AMO (2019b), 'Rozhodnutie, Číslo 2019/DOV/POK/2/20, Bratislava 15 Júla

- 2019' [Decision, Number: 2019/DOV/POK/2/20 Bratislava, 15 July 2019], Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/data/att/2053.pdf> [accessed 8 Apr 2021]
- AMO (2020), 'PMÚ SR zverejňuje spoločné vyhlásenie európskych súťažných autorít o uplatňovaní súťažných pravidiel v čase koronavírusovej krízy' [The AMO of the Slovak Republic publishes a joint statement of European competition authorities on the application of competition rules in times of coronavirus crisis], Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/pmu-sr-zverejnuje-spolocne-vyhlasenie-europskych-sutaznych-autorit-o-uplatnovani-sutaznych-pravidiel-v-case-koronavirusovej-krizy/> [accessed 8 Apr 2021]
- AMO (2021a), 'Prioritizačná politika Protimonopolného úradu Slovenskej republiky' [Prioritization policy of the Antimonopoly Office of the Slovak Republic], Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/6744-sk/priorizacna-politika-protimonopolneho-uradu-slovenskej-republiky/> [accessed 24 Oct 2021]
- AMO (2021b), 'PMÚ SR podporuje projekt výskumu a vývoja výpočtových metód pre oblasť ochrany hospodárskej súťaže—Computational Antitrust na Stanfordovej univerzite v Kalifornii' [The AMO supports the project of research and development of computational methods in the field of competition protection—Computational Antitrust at Stanford University in California], Antimonopoly Office of the Slovak Republic. Retrieved from <https://www.antimon.gov.sk/6545-sk/pmu-sr-podporuje-projekt-vyskumu-a-vyvoja-vypoctovych-metod-pre-oblast-ochrany-hospodarskej-sutaze-computational-antitrust-na-stanfordovej-univerzite-v-kalifornii/> [accessed 5 Apr 2021]
- Blažo, O.** (2017), 'Definícia pojmu podnikateľ v zákone o ochrane hospodárskej súťaže ako prekážka eurokonformnej aplikácie súťažného práva' [Definition of the term entrepreneur in the Act on the Protection of Competition as an obstacle to the Euroconform application of competition law] in *Efektívnosť právnej úpravy ochrany hospodárskej súťaže—návrhy de lege ferenda: Zborník z konferencie* [Effectiveness of competition law—proposals *de lege ferenda*, Proceedings of the scientific conference held on 25 September 2017 at the Faculty of Law, Comenius University in Bratislava], Bratislava: Univerzita Komenského v Bratislave, Právnická fakulta.
- Botta, M. & Wiedemann, K.** (2018), *EU Competition Law Enforcement vis-à-vis Exploitative Conducts in the Data Economy Exploring the Terra Incognita*, Working Paper 18-08, Munich: Max Planck Institute for Innovation and Competition Research Paper Series, pp. 1–89. <https://doi.org/10.2139/ssrn.3184119>

- CodeX, Computational Antitrust* (2021), [Home page]. Retrieved from <https://law.stanford.edu/codex-the-stanford-center-for-legal-informatics/computational-antitrust/> [accessed 5 Apr 2021]
- Commission Notice on the definition of relevant market for the purposes of Community competition law, *OJ C* 372, 9.12.1997, pp. 372/5–372/13.
- Commission Regulation (EU) no. 330/2010 of 20 April 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices, *OJ L* 102, 3.4.2010, pp. 1–7.
- Communication from the Commission, Notice on agreements of minor importance which do not appreciably restrict competition under Article 101(1) of the Treaty on the Functioning of the European Union (De Minimis Notice), *OJ C* 291, 30.8.2014, pp. 291/1–291/4.
- Competition & Markets Authority (2018), *Pricing Algorithms: Economic Working Paper on the Use of Algorithms to Facilitate Collusion and Personalised Pricing*, CMA94. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746353/Algorithms_econ_report.pdf [accessed 5 Apr 2021]
- Crémer, J.; de Montjoye, Y.-A. & Schweitzer, H.** (2019), *Competition Policy for the Digital Era*, Luxembourg: Publications Office of the European Union. Retrieved from <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf> [accessed 16 Apr 2021]
- ECN (2020), ‘Antitrust: Joint statement by the European Competition Network (ECN) on application of competition law during the corona crisis.’ Retrieved from https://ec.europa.eu/competition/ecn/202003_joint-statement_ecn_corona-crisis.pdf [accessed 8 Apr 2021]
- “*Eturas*” *UAB and Others v. Lietuvos Respublikos konkurencijos taryba* [2016], C-74/14, ECLI:EU:C:2016:42, 21.1.2016.
- European Commission (2013), ‘Antitrust procedures in abuse of dominance (Article 102 TFEU cases).’ Retrieved from https://ec.europa.eu/competition/publications/factsheets/antitrust_procedures_102_en.pdf [accessed 6 Apr 2021]
- Ezrachi, A. & Stucke, M. E.** (2015), ‘Artificial intelligence & collusion: when computers inhibit competition,’ *University of Illinois Law Review*, vol. 2017, no. 5, pp. 1775–1809. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2591874 [accessed 7 Apr 2021]
- Fresh Del Monte Produce, Inc. v. European Commission* [2013], T-587/08, ECLI:EU:T:2013:129, 14.3.2013.
- Gal, M. S.** (2018), ‘Algorithms as illegal agreements.’ Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3171977 [accessed 23 Jan 2021]

Hoffmann-La Roche & Co. AG v. Commission [1979], C-85/76, ECLI:EU:C:1979:36, 13.2.1979.

Jones, B. & Sufrin, B. (2016), *EU Competition Law*, Oxford: Oxford University Press.

Kalesná, K. & Patakyová, M. T. (2019) 'Subjects of legal regulation—different approaches of competition, public procurement and corporate law,' in M. Milkovic, D. Kecek & K. Hammes (eds.) *Economic and Social Development, 46th International Scientific Conference on Economic and Social Development—“Sustainable Tourist Destinations”: Proceedings*, Varazdin: Varazdin Development and Entrepreneurship Agency, pp. 210–219.
<https://doi.org/10.2139/ssrn.3546676>

Kalesná, K. (2019), 'Independence of bids in public procurement,' *Bratislava Law Review*, vol. 3, no. 2, pp. 69–75. <https://doi.org/10.46282/blr.2019.3.2.148>

Lawrence, S. & Lisnsner, M. (2017), 'Eturas – Any conclusions on platform collusion...?' *Kluwer Competition Law Blog*, January 19. Retrieved from http://competitionlawblog.kluwercompetitionlaw.com/2017/01/19/eturas-conclusions-platform-collusion/?doing_wp_cron=1598453604.6673059463500976562500 [accessed 31 May 2021]

Maik, W. (2019), 'Algorithm-based pricing in online retailing as concerted practice. Covering the “predictable agent” with Article 101(1) TFEU.' Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3536959 [accessed 5 Apr 2021] <https://doi.org/10.2139/ssrn.3536959>

Mazúr, J. & Patakyová, M. T. (2019), 'Regulatory approaches to Facebook and other social media platforms: towards platforms design accountability,' *Masaryk University Journal of Law and Technology*, vol. 13, no. 2, pp. 219–241.
<https://doi.org/10.5817/MUJLT2019-2-4>

Niels, G.; Jenkins, H. & Kavanagh, J. (2016), *Economics for Competition Lawyers*, 2nd ed., Oxford: Oxford University Press.

Patakyová, M. T. (2019a), *Ludskoprávne aspekty hospodárskej súťaže. Antitrust z pohľadu ľudských práv* [The aspects of human rights of competition. Antitrust from a human rights perspective], Bratislava: Wolters Kluwer.

Patakyová, M. T. (2019b), 'Artificial intelligence and bid rigging,' in J. Glavanits, B. Horváthy & L. Knapp (eds.) *EU Business Law and Digital Revolution: Selected Studies from New Fields of Technology*, Gyor: Széchenyi István University, Deák Ferenc Faculty of Law and Political Sciences, Department of International and European Law, pp. 29–42.

Patakyová, M. T. (2020a), 'Competition law in digital era—how to define the relevant market?' in *Economics & Management: How to Cope With Disrupted Times: Proceedings of the 4th International Scientific Conference EMAN 2020*, ONLINE-Virtual, pp. 171–177. <https://doi.org/10.31410/EMAN.2020.171>

- Patakyová, M. T.** (2020b), 'Notion of anticompetitive agreement challenged in digital environment,' *European Studies: The Review of European Law, Economics and Politics*, vol. 7, no. 1, pp. 237–252.
- Picht, P. G. & Freund, B.** (2018), 'Competition (law) in the era of algorithms,' Max Planck Institute for Innovation & Competition Research Paper, no. 18-10. <https://doi.org/10.2139/ssrn.3180550>
- Pike, C.** (2017), 'Hearing on rethinking the use of traditional antitrust enforcement tools in multi-sided markets,' OECD Competition Papers, DAF/COMP/WD(2017)55. <https://doi.org/10.2139/ssrn.3487604>
- Stavytskyy, A.; Kharlamova, G. & Stoica, E. A.** (2019), 'The analysis of the Digital Economy and Society Index in the EU,' *Baltic Journal of European Studies*, vol. 9, no. 3, pp. 245–261. <https://doi.org/10.1515/bjes-2019-0032>
- Stucke, M. E. & Grunes, A. P.** (2016), *Big Data and Competition Policy*, Oxford: Oxford University Press.
- Thyssen Stahl v. Commission* [2003], C 194/99 P, ECLI:EU:C:2003:527, para. 81.
- Townley, C.; Morrison, E. & Yeung, K.** (2017), 'Big Data and personalised price discrimination in EU competition law,' Legal Studies Research Paper Series: Paper no. 2017-38, King's College London Dickson Poon School of Law. <https://doi.org/10.2139/ssrn.3048688>
- UNCTAD (2020), 'COVID-19 has changed online shopping forever, survey shows,' 8 October. Retrieved from <https://unctad.org/news/covid-19-has-changed-online-shopping-forever-survey-shows> [accessed 5 Apr 2021]
- Vítková, B.** (2013), 'Consumer protection on so called discount websites,' *International and Comparative Law Review*, vol. 13, no. 2, pp. 121–131. <https://doi.org/10.1515/iclr-2016-0075>
- Whish, R. & Bailey, D.** (2018), *Competition Law*, 9th ed., Oxford: Oxford University Press. <https://doi.org/10.1093/law-ocl/9780198779063.001.0001>
- Wolski, D.** (2020), 'Private antitrust enforcement in digital market,' *Bratislava Law Review*, vol. 4, no. 2, pp. 147–160. <https://doi.org/10.46282/blr.2020.4.2.210>